

THEMATIC SERIES
**No matter of choice:
displacement in a changing climate**

This thematic series explores the scale, patterns, drivers and impacts of internal displacement associated with slow-onset environmental change and disasters to inform policies and practices for managing and reducing displacement risk



Research agenda and call for partners

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CONTEXT AND RESEARCH OBJECTIVE

Internal displacement associated with slow-onset environmental change and disasters is a complex and dynamic phenomenon.¹ Often hard to distinguish from internal migration, displacement driven by gradually evolving environmental change is primarily a development issue. Unsustainable economic growth and development practices accelerate climate change and environmental degradation, which in turn may reduce crop yields and access to natural resources, and eventually force people from their land and communities.² As such, the number of displacements and level of displacement risk in a country facing slow-onset phenomena can be understood as a measure of the sustainability of its development trajectory. The impacts of displacement on affected populations, on rural and urban systems, markets for goods and services, and in many cases societies as a whole, also affect a country's ability to meet its national development and economic growth objectives in the mid-to-long term.³

Displacement driven by the loss of productive land, living space and vital ecosystem services caused by irreversible environmental change such as sea-level rise, salinization or desertification poses a potential threat to national security and stability.⁴ As areas of a country become uninhabitable and traditional livelihoods increasingly unviable, new and systemic challenges arise for communities and their governments. Existing institutional arrangements and normative frameworks may break down, with potential impacts on property and user rights, and new governance systems may be needed if demographics shift dramatically.⁵

WHAT WE KNOW

There is a growing body of knowledge about how the dynamics of human mobility develop in the context of slow-onset hazards and processes.⁶ The Cancún Adaptation Framework clearly separates forced displacement from voluntary migration, and also from planned relocation, which can be either voluntary or forced.⁷ Distinguishing between forced and voluntary movements in slow-onset hazard contexts is difficult yet critical in its implications for policy. Whereas the decision to move in order to counter the challenges faced by the impacts of climate change can be an opportunity and a positive option with the possibility of return, being forced to move against one's will usually has many negative consequences, including the loss of assets, community cohesion and access to services.

A thorough review of literature conducted by IDMC in partnership with a large number of academic institutions, civil society organisations and experts as part of its engagement in the UNFCCC WIM Task Force on Displacement has brought to light four main ways in which forced displacement in slow-onset contexts comes about.⁸

1. SLOW-ONSET EVENTS CAN ERODE THE CAPACITY OF ECOSYSTEMS TO PROVIDE CRITICAL SERVICES SUCH AS THE AVAILABILITY OF FRESH WATER, FOOD, SHELTER AND ENERGY PRODUCTION.

Scarcity of vital resources can lead to a serious disruption of livelihoods. When disruption of livelihoods overwhelms the community's capacity to cope with the changes, the situation turns into a disaster and risks of displacement are more prominent.⁹ Slow-onset events can lead to acute food insecurity as they directly affect environmentally based livelihoods, including agriculture, pastoralism, horticulture, fisheries or hunter gathering.¹⁰ When communities are unable to cope with acute food insecurity displacement becomes a survival strategy. The regions with the highest vulnerability to undernutrition are also areas where yield losses related to climate change are predicted to be relatively high, thus further increasing the vulnerability of these populations to food insecurity.

2. SLOW-ONSET EVENTS MAY TURN INTO A DISASTER PROMPTED BY A RAPID-ONSET EVENT.

Many impacts of slow-onset events are in fact rapid-onset events. For example when sea-level rise suddenly turns into flooding, or when desertification turns into wild fires, or when temperature increase turns into heatwaves. When rapid-onset disasters overwhelm the population's capacity, they may increase risk of displacement. In these contexts, slow-onset events are one of the underlying factors of displacement. It is therefore complex to attribute a disaster to either a rapid or a slow-onset event as in many situations the two types of event are intertwined. In the face of rapid-onset disaster, people may see no other option than to seek assistance elsewhere for their survival and are thus displaced.

3. SLOW-ONSET EVENTS MAY ERODE COMMUNITIES' AND ECOSYSTEMS' CAPACITY TO WITHSTAND THE IMPACTS OF SLOW AND RAPID-ONSET EVENTS, AND POSSIBLY TRIGGER A CASCADE OF HAZARDS, PROMPTING DISPLACEMENT.

When livelihoods are not restored or strengthened after a disaster, either induced by a slow or a rapid-onset event, subsequent events, even if less severe, can push households over the edge, pushing them more quickly into a situation of acute humanitarian need and resulting in a vicious cycle.¹¹ For example, mangrove destruction due to sea-level rise can result in higher exposure of coastal communities to storm surges as capacity of mangroves to break waves and protect low-lying coastal areas from flooding diminishes. Similarly, slow-evolving desertification can undermine the ability of a community to cope with heavy rainfall as the absorptive capacity of soils reduces, leaving larger areas prone to flooding.



Tekua, 10, sits on a dead coconut tree in the village of Tebunginako, Abaiang Atoll, South Tarawa, Kiribati. Abaiang is most threatened by rising sea levels. The country's government says Tebunginako is a "barometer for what Kiribati can expect in the future". Since the 1970s residents have seen sea levels rise and erosion has meant that a major part of the village has had to be abandoned. Photo: UNICEF/Vlad Sokhin, January 2016

A slow-onset event may turn into a disaster when the population has not yet recovered from a previous rapid-onset disaster. Likewise, slow-onset events may render populations more vulnerable to rapid-onset events. When a population's coping capacity is weakened by underlying slow-onset events, even less intense rapid-onset events may turn into disasters.¹²

| 4. SLOW-ONSET EVENTS ARE A HIDDEN AGGRAVATING FACTOR IN MANY CONTEXTS, ACTING AS A THREAT MULTIPLIER FOR OTHER DRIVERS OF CRISIS.

Increasingly, the different factors driving both slow-onset environmental as well as social change become difficult to disentangle one from another, and may culminate in humanitarian crises, creating internal and cross border displacement. Slow-onset events, although they are not a direct catalyst for violent conflict, can exacerbate already fragile situations. They can fuel conflict over resource scarcity and are often described as a multiplier or magnifier of pre-existing conflicts.¹³ For example, the emergence of Boko Haram in the Lake Chad region, and in northern Nigeria specifically, has been linked to natural resource scarcity exacerbated by drought and desertification in the area.¹⁴

According to the Fifth Assessment Report of the IPCC, climate change impacts contribute to stresses on community cohesion (e.g. amplified poverty, economic duress) and diminish abili-

ties to diffuse tensions that fuel violent conflict and persecution-related human mobility, especially in fragile states.¹⁵ On the other hand, conflict, violence and other polarised societies, political ideologies and social and ethnic divides can further contribute to the disruption of livelihoods.¹⁶ Such disruptions may render populations more vulnerable and further exposed to slow-onset events, while accelerating their vulnerability to other more acute political factors.¹⁷

IDMC is embarking on this research agenda by applying an internal displacement risk lens to existing evidence and conducting new analysis on policy options for countries that face large-scale internal displacement. The main question we want to answer is: "How can governments and their partners manage and reduce displacement risk in slow-onset disaster contexts?"

The overarching objective of our research is three-fold:

- to better understand the risk conditions in different slow-onset contexts, including hazard, exposure, vulnerability and coping capacity
- to assess the scale and impact of displacement and levels of displacement risk
- to identify policies, investments and practices that offer forward-looking and sustainable approaches to reducing internal displacement in each situation

WHAT WE DON'T KNOW AND WHY IT MATTERS

It is difficult to paint a consistent picture of displacement associated with slow-onset events, because of the wide range of phenomena, impacts, drivers, types of movement they provoke and regions they affect. It is neither easy to characterise, nor easy to plan for and more concrete examples and evidence of how displacement occurs in different situations is needed to inform more solid risk assessments and evaluations of appropriate policy responses.

A key problem with making the case for the prospective management of this type of displacement risk is that the critical nature of slow-onset events only tends to become apparent when a crisis point is reached. It may not be useful in this sense to distinguish between slow and sudden-onset events that trigger displacement, because slow-onset processes often manifest in extreme weather events and trigger sudden-onset crises. For example, sea-level rise can result in more serious storm surges and drought and desertification can exacerbate flooding due to diminished run-off and absorptive capacity of soils.

The notion of everyday risk and long-term planning is not one that conveys a sense of immediacy. When people live with high levels of vulnerability on a daily basis, communities and countries tend to struggle in prioritising investments to reduce risk over addressing immediate concerns. Doing so by reducing existing vulnerabilities could, however, be a no-regrets investment if undertaken based on sound assessments and with the involvement of those at risk.

There are inherent uncertainties in the way slow-onset impacts will play out in a given locale and how this will affect the magnitude and patterns of displacement. More research is also needed to better contextualise and understand this type of displacement, particularly at scales ranging from regional to local, where slow-onset impacts may deviate from the broader trends identified in global-scale analyses. The existing literature is consistent, however, in demonstrating that slow-onset environmental factors are just one in a range of considerations that influence people's decision to move.¹⁸ They are often not even the dominant factor, which means a range of policy and investment options exist for prospective risk reduction and effective responses.

Increasing the resolution of risk models and improving data inputs, particularly demographic data, are among the immediate opportunities for advancement. By improving our production of spatially disaggregated projections of populations at risk of displacement, we will also improve our ability to identify appropriate policy responses. Building country-level capacity to collect and monitor relevant data would increase understanding of the interactions between the impacts of slow-onset events, ecosystems, livelihoods and displacement, and help countries tailor policy, planning and investment decisions.

New data sources, including from satellite imagery and mobile phones, and most importantly better access to information products from Earth observations and climate models, will be of direct benefit in improving the quality of information about displacement associated with slow-onset phenomena. The inclusion of questions on these issues in national censuses and other surveys would also help to advance data collection. The more data becomes available on slow-onset events and their impacts on livelihoods, the more accurate the scenarios and models will become.

Migration associated with the gradual impacts of climate change does not necessarily represent a failure of adaptation policies. It may also be an adaptation strategy in and of itself. The Nansen Protection Initiative and the Cancun Climate Change Adaptation Framework recognise this, stating that migration refers to "human movements that are predominantly voluntary insofar as people, while not necessarily having the ability to decide in complete freedom, still possess the ability to choose between different realistic options. In the context of slow-onset natural hazards, environmental degradation and the long-term impacts of climate change, such migration is often used to cope with, 'avoid or adjust to' deteriorating environmental conditions that could otherwise result in a humanitarian crisis and displacement in the future."¹⁹ Adaptation policies, however, tend not to include migration. There is also a "tipping point" at which communities shift from voluntary, adaptive migration into forced displacement. When their coping capacities are exhausted, they risk falling into a gradual process of impoverishment, eventually leading to their displacement.

Displaced people are often portrayed as victims of slow-onset events in need of assistance and protection, but the literature also provides examples of how they can be drivers of community-based solutions. For many communities, return is a desirable durable solution, but it is less likely in situations where slow-onset climate processes are at play because they tend to be all but irreversible. Integration then becomes a major issue that requires more attention and resources, and importantly, the leadership of affected communities.

It is clear that the scale and nature of displacement in slow-onset situations depends largely on the implementation of coherent adaptation, disaster risk reduction and development policies. These include not only those that seek to mitigate the impacts of slow-onset phenomena, but also those that treat migration as a positive strategy and planned relocation as an option of last resort. The latter is clearly a vital recourse in situations where land is permanently degraded or lost, or the risks people face become unsustainable. In these contexts, provisions for resettlement and national relocation guidelines will need to be developed and reviewed in collaboration with communities. New approaches to planned relocation highlight the need for local communities, particularly women, young people, indigenous groups and other minorities to lead through sharing their experiences, making decisions and determining solutions.²⁰



An Inupiat girl stands on a ice floe on a shore of the Arctic Ocean in Barrow, Alaska in the United States of America. The anomalous melting of the Arctic ice is one of the many effects of global warming that has a serious impact on the life of humans and the wildlife. Photo: UNICEF/Vlad Sokhin, July 2016

PRIORITY RESEARCH AREAS AND KEY QUESTIONS

This research programme and thematic series builds on a number of studies we have conducted in recent years.²¹ With it we aim to systematically analyse how displacement associated with environmental degradation and climate change comes about, and how slow-onset events determine displacement risk. We want to determine the scale and duration of displacement, the destinations and profiles of those displaced and the policy options available to reduce the impact of slow-onset events on displacement risk.

A number of key knowledge gaps emerge, which we have broadly organised around three main research objectives, each with a set of research questions:

UNPACKING THE ROLE OF SLOW-ONSET EVENTS IN TRIGGERING DISPLACEMENT

- Are environmental degradation and climate change just underlying drivers of displacement that combine with socio-economic factors, or triggers in their own right?
- Can and should we distinguish between environmental or economic migration and displacement in slow-onset situations? How should we define the boundaries between

each category of movement for counting displacements on the one hand and contextual analysis on the other?

- What are the tipping points that trigger displacement in the context of different slow-onset events and processes?
- What role do risk perception and tolerance play in triggering and delaying displacement, particularly large-scale movements?

UNDERSTANDING THE POTENTIAL SCALE OF DISPLACEMENT

- How many people are at risk of being forcibly displaced by slow-onset hazards and disasters?
- How many new displacements can be attributed to slow-onset events, and how many people can be considered displaced as a result of irreversible environmental degradation and climate change?
- How many are likely to remain within their country's borders?

ANALYSING DISPLACEMENT RISK AND POLICY RESPONSES

- Can we identify specific displacement patterns in different slow-onset situations and for specific population groups?
- What is the profile of those displaced and what support do they receive?
- What conditions allow people to stay if they choose or settle elsewhere successfully, and how can they be created?

- What mediating factors shape displacement patterns, including policy and market responses? Which institutional arrangements have the potential to reduce displacement risk?
- Does displacement mainly take place from rural to urban areas?
- How do countries that face irreversible environmental degradation and climate change plan for permanent relocation?
- Are there national and regional frameworks on which to base anticipatory in-country and cross-border migration policies that would reduce the risk of forced displacement?

RESEARCH APPROACHES AND METHODS

In order to answer these questions, IDMC will collaborate with experts and research partners in developing a range of methodological approaches through four main work streams:

I. TYPOLOGY OF DISPLACEMENT

IDMC will develop a typology of displacement in slow-onset disaster contexts and in situations of irreversible environmental change. Typologies only currently exist for the hazards themselves, as in the UN Framework Convention on Climate Change (UNFCCC) classification (see figure 1). To do so, over the next two years we will assess current hazards and future trends, incorporating climate change scenarios; estimate current vulnerability and exposure levels and future trends, based on projections for shared socioeconomic pathways (SSPs); and analyse governance and market capacity.

We will identify typical characteristics of hazards, exposure, vulnerability and capacity to develop a typology of slow-onset situations in which displacement occurs. Based on this, we will conduct a cluster analysis of countries and displacement situa-

tions to identify sets with similar characteristics. Within these sets we will undertake statistical and probabilistic risk assessments, qualitative research on the particularities of displacement situations, behavioural analysis of decision-making processes and assessments of appropriate policy responses. These will act as inputs to comprehensively explore the pathways through which slow-onset events will impact displacement and migration outcomes in different socioeconomic contexts, and how they differ from one another.

II. DISPLACEMENT RISK ASSESSMENTS

Based on the typology and characteristics identified within each cluster, we will conduct risk assessments in countries that illustrate each type of situation, using deterministic, statistical or fully probabilistic risk assessments. The first step will be to identify relevant risk metrics for each situation that are appropriate for both national-level policy development and investment planning and local-level programming and implementation. Starting with one or two types of situation, the second step will be to conduct granular risk assessments in partnership with local authorities.

III. ANALYSIS OF DISPLACEMENT RISK AND POLICY OPTIONS

For each type of displacement context, we will undertake local research that combines quantitative and qualitative methods to unpack displacement dynamics, behavioural patterns, the enabling environment in terms of socioeconomic conditions and institutional frameworks. This will enable us to dive deeper into the country risk assessments and understand the role of different policies and instruments in reducing or increasing displacement. We will also review existing policies and strategies under development, including on resettlement and those with a forward-looking approach to migration, as part of the analysis.

FIGURE 1: UNFCCC classification of slow-onset events and impacts of climate change



Source: UNFCCC

Key questions include:

- What opportunities exist to better integrate ways of reducing vulnerability and exposure to slow-onset events in sustainable development, adaptation and disaster risk reduction policies?
- How can better research on the impact of human decisions about ecosystem and land-use management on displacement risk help to improve policymaking?
- What entry points are there for establishing systematic observation and early warning systems to monitor the risks and impacts on populations of all types of slow-onset events in all affected regions?
- What practical challenges does relocation present in terms of respect for international human rights standards, social justice, cultural considerations and the wellbeing of relocated people and host communities?

We will also conduct interviews with internally displaced people, host community members and people in communities of origin to gain insight into their perceptions of risk and opportunity, their motivation and capacities for moving and barriers to their doing so. The perception of risk, for example, depends largely on the pre-existing conditions of the individuals, households and communities concerned.²² Low perception of risk or perverse incentives to stay put have the potential to undermine community health and wellbeing when less vulnerable households decide not to migrate pre-emptively, only later to become forcibly displaced or trapped.²³ Many people, however, are simply unable to move out of areas where their survival may be endangered because they lack the resources to do so.²⁴

Perception of risk and a decision to move may also take place at the community rather than the household level. Communities affected by the melting of permafrost in Alaska and sea-level rise in Fiji have documented the impacts of slow-onset situations on their livelihoods for decades and have a common perception of the risks associated with a decision to stay.²⁵ Such communities are in a stronger position to seek assistance, compensation and support for relocation from their government and other external entities.

IV. MODELLED SYSTEM DYNAMICS AND POLICY OUTCOMES

Based on system dynamics and agent-based modelling approaches, we will map the ways in which policy responses and long-term investments determine displacement risk more systematically and to understand under what circumstances these displacements will likely occur and what the tipping points will be (see figure 2).

Using the results from our qualitative and quantitative research on displacement dynamics, risks and policy options, we will seek to reveal the different ways in which slow-onset phenomena influence different aspects of the system (see figure 3). This approach will enable us to model scenarios for displacement risk in different slow-onset situations and with different policy interventions.

FIGURE 2: Highlighted impacts of slow-onset events on natural resources, economic sectors and displacement risk for small island developing states (SIDS)

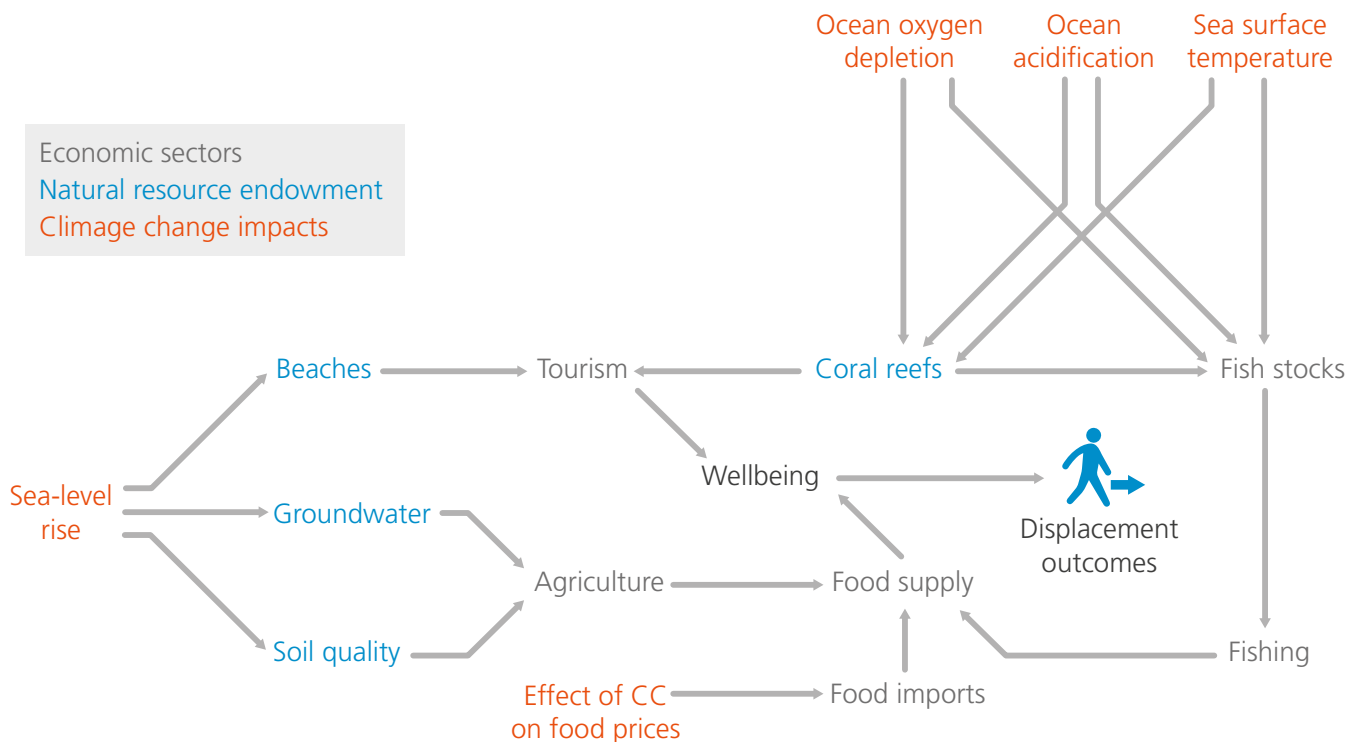
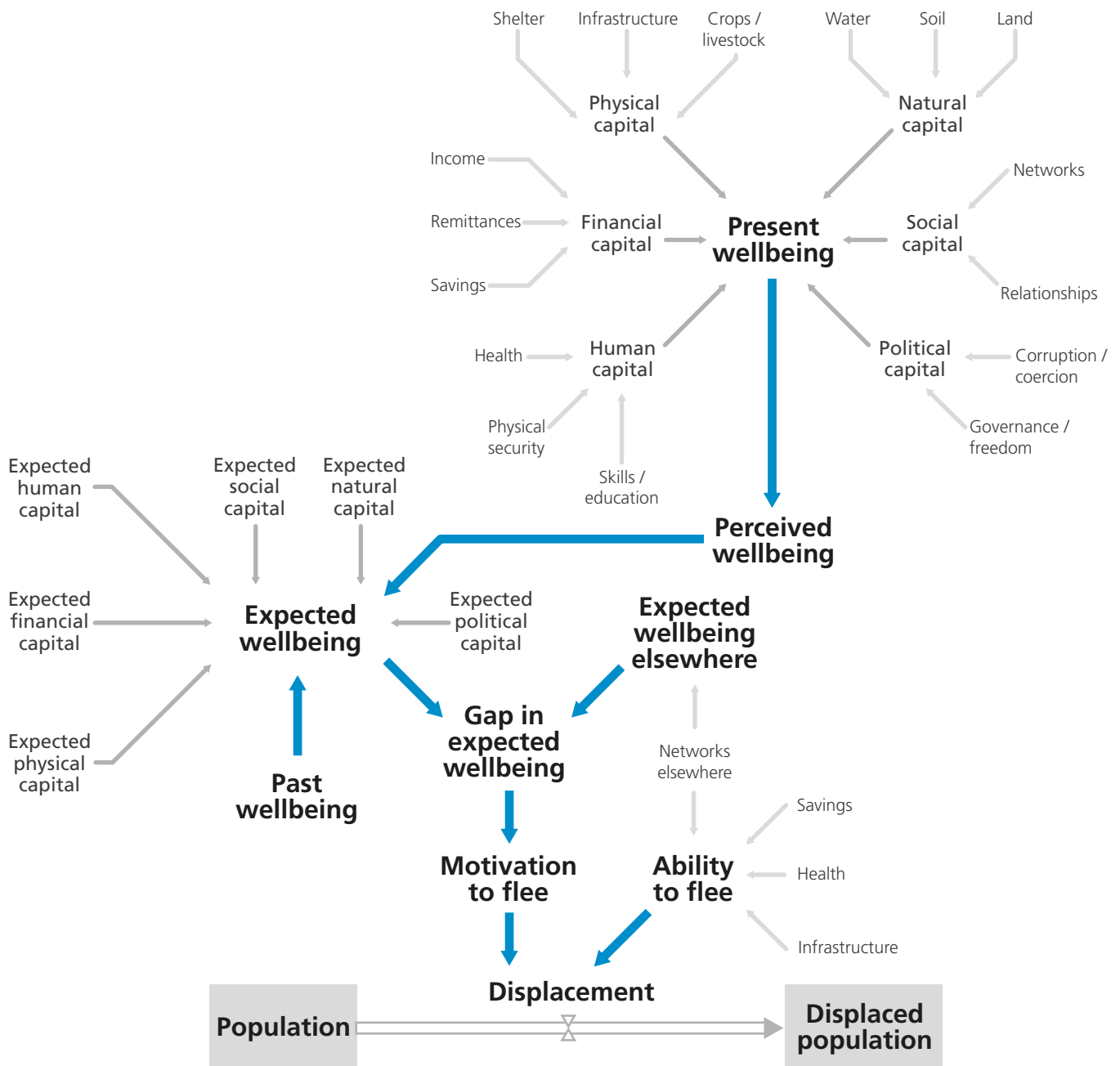


FIGURE 3: Links between physical and socioeconomic environment, individual well-being and displacement risk



CALL FOR PARTNERS AND NEXT STEPS

This ambitious research agenda requires diverse approaches and substantial investment in the analysis of system dynamics. This means our data collection, research and analysis will have to cut across a range of disciplines and is likely to require input from experts including behavioural scientists, migration and displacement specialists, climate modellers, environmental scientists, economists, sociologists, political analysts and sector specialists.

Based in Geneva, we offer academics, government bodies, NGOs and research institutions from all regions access to international policy forums related to sustainable development,

disaster risk reduction, climate change adaptation, migration and displacement. With our partners, we intend to inform global, regional and national policy and practice with strong evidence and clearly communicated messages on how to manage and reduce displacement associated with slow-onset environmental change and disasters.

We are delighted to already be working in close partnership with leading European institutions including the Hugo Observatory of Liege University in Belgium, Science Po in France and the University of Neuchatel in Switzerland, and the Famine Early Warning Systems Network (FEWS NET) and National Oceanic and Atmospheric Administration (NOAA) in the US. To build on this collaboration, we now seek to engage new partners, particularly in Africa, the Americas and Asia and the Pacific, to broaden and strengthen our collective expertise and analysis.

NOTES

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Cover photo: An internally displaced woman walked four hours with a heavy load to the village of Shisha in Somalia, crossing the mountains bordering the dry valley. From her 200 sheep, nothing is left. After building her tent, he intends to repeat the journey, bringing her children to the village. Credit: NRC/Adrienne Surprenant, April 2017

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